The law as an instrument for climate protection: the case of integrated approaches to understanding emissions trading

Chapter 19

The law as an instrument for climate protection: the case of integrated approaches to understanding emissions trading[39]

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[39] This chapter builds on previous work by the author regarding emissions trading, which was concluded in February 2015. The new direction presented in this chapter is that it shows how the legal discipline can become part of integrated studies into greenhouse gas emissions trading.

Abstract

This chapter illustrates the need for cross-cutting studies regarding the question how the reduction of greenhouse gases emissions, particularly by means of "emissions trading", can be regulated in an effective and efficient way within the boundaries of the rule of law. It identifies the following research challenges:

1) Typical legal concepts such as procedural rights and enforcement deserve combined studies in order to examine how to design and apply the law.
2) In-depth understanding is needed of the relationship between natural science and the legal discipline, not only in view of the justification that climate science provides for climate regulation, but also in view of the way the law can deal with scientific uncertainties.
3) Multidisciplinary research is needed to understand whether market-based regulatory interventions are suitable for developing countries, or whether other regulatory instruments are more suitable for countries with a potentially weak legal infrastructure.

19.1 Introduction

The huge transition needed to combat climate change not only asks for major societal and technological changes, but also for a major transformation of the law to provide effective regulatory instruments for the reduction of greenhouse gases. Much legal research is being done and still needs to be done concerning the basic question of what role the law plays in enabling the transition towards a low-carbon society, and part of this research deals with the design and application of regulatory instruments addressed to greenhouse gas emitters. The use of market-based regulation by means of "emissions trading" has become a major characteristic particularly of international and European Union (EU) climate law. This means that an understanding of the regulation of the greenhouse gas emission reductions requires economic and legal perspectives to be combined, together with insights from other disciplines like behavioural science, which investigates how actors react to different kinds of regulatory approaches. This chapter illustrates the need for cross-cutting and more integrative studies regarding the question how the reduction of greenhouse gases emissions, particularly by means of "emissions trading" can be regulated in an effective and efficient way within the boundaries of the rule of law.

19.2 Role of the law and choice of regulatory options

The law can basically be seen as a powerful instrument that governments can use to guide actors in society towards a particular policy goal, especially by means of regulations that impose enforceable duties on them. However, the law cannot simply be seen as a technocratic tool at the disposal of governments. In fact, the law determines whether and how governments may steer society, in other words, governments themselves have to respect legal boundaries.[40] This means, for instance, that administrative law principles like legal certainty (the law must be clear and reliable for those who are subject to it), proportionality (citizens' freedom should be limited by public authorities only to the extent necessary for the protection of the public interest), and the principle of equal treatment (decisions should not treat people unequally without stating a justified reason for doing so) have to be respected, in addition to human rights like the enjoyment of private property or the respect for private and family life.[41] In this sense, the law serves as an instrument for the government *and* as a

[40] The legal discipline, particularly classical legal positivism, aims to objectively identify the applicable law. Next to this, an activist oriented legal scholarship seeks to prescribe what the law ought to be. On legal scholarship see Gleider Harnändez, The activist academic in international legal scholarship, ESIL Reflections volume 1, issue 11, available at http://www.esil-sedi.eu/node/463 (accessed 30 January 2014).

[41] The meaning of these principles as part of the European legal systems is here represented in a very basic sense. On administrative law principles see C. Backes and M. Eliantonio, Administrative law, in: Jaap Hage,

guarantee for citizens and business against unlawful governmental intervention.[42] It also means that careful assessments are needed to ensure that governmental regulatory interventions are in accordance with the law. Only after a regulatory instrument has been adopted, will it become clear what its effects are in practice. Courts might find that a regulatory intervention is not in agreement with a higher law. As a result, a regulatory approach may turn out to be less effective than assumed, or hoped for, at the time of adoption. Both theoretical ex-ante studies (before a regulatory instrument gets adopted) and empirical ex-post studies (its application in practice and the gradual clarification of the opportunities and limits by means of case law) are needed to contribute, through legal research, to the realisation of effective regulatory approaches in view of the higher aim, that is, the transition towards sustainable development.

Interestingly, most societal problems are open to many different regulatory approaches. One can think of a toolbox of instruments, and the legislator usually has quite extensive freedom of choice from among the available tools. Regulatory measures may consist of (a) traditional interventions (like the classical top-down permit, where the government prescribes the behaviour of private actors), (b) economic interventions (for instance environmental taxes or grants) and (c) informational interventions (like the requirement to attach an energy label to a certain product).[43] Every regulatory intervention needs to meet the criteria of the law, including the economic and informational ones: while taxation, for instance, is often called an "economic instrument", since it clearly follows the market rationale by putting a price on environmental pollution, one should not forget that such a tax remains meaningless if it is not applied within a legal framework consisting of binding obligations and a related monitoring and enforcement mechanism. Without the law, economic regulatory instruments can hardly be applied. However, designing and applying legal frameworks for these market-based instruments may face many challenges and problems. This is particularly true when new regulatory models are being applied, as is the case with emissions trading for the reduction of greenhouse gases.

19.3 Emissions trading: legal perspectives

Emissions trading has originated in the economic literature, and only later entered legal literature and practice. The appealing and simple idea discussed by the economist J.H. Dales in 1968 of putting a cap on pollution while distributing tradable emission rights by

Bram Akkermans (ed.), Introduction to Law, Springer 2014 p. 196-197, and, more elaborately, for instance: Xavier Groussot, General Principles of Community Law, Europa Law Publishing, 2006, p. 20-26.

[42] Moreover, the law provides rights and tools to victims enabling them to claim damages and to prevent potential damage; the law also provides rights to organisations, including environmental organisations, enabling them to pursue their interests.

[43] Richard B. Stewart (2007). Instrument Choice, In: Daniel Bodansky, Jutta Brunnée and Ellen Hey, The Oxford Handbook of International Environmental law, pp. 147-181, Oxford University Press.

means of an auction has been intensively discussed by economists.[44] After its conception in the literature, the idea has been put into practice, first in the USA for combating acid rain emissions, applicable from 1995 onwards. After this, the "world" embraced the instrument in concluding the Kyoto Protocol in 1997 (as part of the United Nations Framework Convention on Climate Change established in 1992). The adoption of emissions trading was complementary to the establishment of binding emissions reduction targets for developed countries, as a means to achieve those targets in a cost-effective way. It is remarkable to see how quickly emissions trading became part of a treaty, resulting in an international carbon market encompassing not only developed but also developing countries. However, the USA refused to accept emission reduction targets by ratifying the Kyoto Protocol, although they were at that time the most experienced country as regards emissions trading. In contrast, in order to comply with the emission reduction target of the Kyoto Protocol, the EU has adopted the instrument in the form of an EU-wide greenhouse gas emissions trading scheme, whose first trading period started in 2005.[45] Practice shows that the instrument is not functioning optimally: elaboration of the rules of the emissions-trading instrument in a political environment leads to deviations from theoretical models.[46] Moreover, in the course of drafting the instrument, the legislative framework for emissions trading needs to be fine-tuned to the specific pollution problem being regulated, the prevailing political preferences, and the legal system in which the instrument will be applied. There are, for instance, major challenges with regard to the design and application of the mechanisms to *distribute* the tradable rights among potential polluters. While economic theory has proposed the auctioning of emission rights, free allocation – being less burdensome for the industries covered – has been largely preferred in reality, at least in the US acid rain emissions trading scheme and in the first phase of the EU emissions trading scheme.

Law scholars can contribute to a further understanding of the instrument of emissions trading by focusing on two core topics that are characteristic of the legal discipline: (a) procedural rights and (b) compliance and enforcement.

[44] Dales, J.H. (1968), Pollution, Property and Prices, An essay in Policy-making and Economics, republished in 2002 by Edward Elgar; Tietenberg, T.H. (2006), Emissions Trading, Principles and Practice, 2nd edition, Resources for the Future; see also his emissions trading bibliography posted at http://personal.colby.edu/~thtieten/trade.html accessed 10 February 2015.

[45] Directive 2003/87, as amended; see for instance B. Mortensen (2004). The EU Emission Trading Directive, European Environmental Law Review, 13: 275-284.

[46] The OECD evaluated the functioning of the acid rain trading system quite positively, see: OECD (2004). Tradeable Permits. Policy evaluation, design and reform. The EU ETS directive, however, was reformed in 2009 (and is still under construction) in order to try and improve its design (EU Directive 2009/29), see for instance M. Peeters, S. Weishaar (2009). Exploring Uncertainties in the EU ETS: "Learning by Doing" Continues Beyond 2012, Carbon and Climate Law Review, 1/2009, p. 88-101, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1324876; J. Skjærseth (2008). Implementing EU emissions trading: success or failure? International environmental agreements, 8(3), pp. 275-290; Astrid Epiney (2012). Climate Protection Law in the European Union. Emergence of a New Regulatory System, Journal for European Environmental & Planning Law, Volume 9, Issue 1, pp. 5-33.

Procedural rights represent a very typical strand in the environmental law literature, consisting of access to information, the right for the public to participate in governmental decision-making, and access to the courts to enforce such rights, thereby particularly strengthening the position of Environmental Non-Governmental Organisations. The Aarhus Convention was the first treaty to establish a framework of procedural rights in environmental matters. It has Pan-European coverage, and its Parties include 46 countries from Europa and Central Asia, as well as the European Union.[47] However, the procedural rights of the Aarhus Convention seem to be designed for the more traditional legal approaches, like permitting. As soon as a different regulatory instrument is introduced, like emissions trading, there is a need to interpret how the well-known procedural rights can be applied. A very specific question is, for instance, whether the public should get access to information about emission rights transfers, and whether the public should get any say in the transfers of such rights, for instance when states make use of emissions trading.[48] For such a specific issue, collaboration with economists specialising in market design and the importance of the confidentiality of information in order to let the market do its work seems necessary to understand to what extent access to information regarding emissions trading data can be provided, and whether inter-state deals, like a deal between a developed and a developing country, should or may remain confidential. Another opportunity for cross-cutting research is to examine the intrinsic value of procedural rights. It is commonly expected that procedural rights enhance the quality of governmental decision-making, but further theoretical and empirical research is needed to evaluate under what circumstances and through which methods of public consultation (for instance through national or European emissions reduction plans or policies) this is indeed the case.

Second, a typical legal focal point is compliance with set standards and the means of enforcement. In order to promote compliance, legal frameworks need to be set up for behaviour monitoring and punishment. Examination of the way in which monitoring may be realised and the imposition of different kinds of sanctions incorporates many different legal aspects, including the protection of human rights, which have a two-fold meaning: on the one hand, enforcement authorities need to respect the guarantees provided by human rights against unlawful enforcement action, and on the other hand, the human right to enjoy private and family life (and, in this vein, to be safeguarded from serious pollution) may require governmental action to enforce environmental standards. Not only lawyers, but also economists pay attention to the design of enforcement approaches.[49] Here, the legal and economic perspectives may strengthen

[47] See http://www.unece.org/environmental-policy/treaties/public-participation/aarhus-convention.html.
[48] CJEU, Case C-524/09, Ville de Lyon v. Caisse des dépôts et Consignations.
[49] See for instance Nobel Prize winner Gary Becker, Crime and Punishment: An Economic Approach, in: Gary S. Becker, William M. Landes, eds. (1974). Essays in the Economics of Crime and Punishment, UMI, available at: http://papers.nber.org/books/beck74-1.

each other, also by means of the existing cross-cutting "law and economics" discipline.[50] Moreover, since emissions trading is already being applied in practice, (in an interdisciplinary approach), ex-post evaluations can be conducted to examine how the legal enforcement provisions work. See Box 19.1 below for an example of current case law practice.

Box 19.1 Case Law example

The highest court in the EU, the Court of Justice of the EU, appears to take a very strict approach regarding the imposition of sanctions. This case concerns a very high financial penalty for a Swedish firm that had not surrendered sufficient tradable greenhouse gas allowances before the set deadline, which had happened (according to the defender) because of an administrative error.[51] The case illustrates how points of view can differ regarding the applicable law: the advisor to the Court, the Advocate General, stated that a proportional approach could be taken, taking into account the administrative error on the part of the industry, which is less serious than a deliberate act to pollute the environment, whereas the Court itself adhered to a very strict approach to sanctioning, which does not provide the option of considering specific circumstances on the part of the offender.[52] The rationale behind the strict approach is most likely that a severe and "automatic" penalty is needed, in view of the market-based type of regulation, to deter future illegal behaviour. Whether this point of view is reasonable deserves further research, including legal, economic, and behavioural science experts.

19.4 Regulating greenhouse gas reductions: a call for more integrative studies

Having introduced two specific legal topics and the opportunity for cross-cutting research, we can indicate two additional, more fundamental and complex, research challenges.

First, climate science is a complex and integrated research field for which many different disciplines are relevant. The output produced by natural science to improve our understanding of the climate system is obviously relevant for regulatory action. For instance, the reason for taking regulatory action – which means that the government

[50] For a more general treatment of an integrated approach to law and economics and environmental economics, see Michael Faure, Göran Skogh (2003), The Economic Analysis of Environmental Policy and Law, Edward Elgar.

[51] C-203/12 , Billerud Karlsborg AB v. Naturvårdsverke.

[52] For a comment to the case (in Dutch), see Tijdschrift voor Milieu en Recht (2014), vol 2, jur nr 21 pp. 99-100.

intervenes in the freedom of economic actors and citizens – has to be based on sound climate science, indicating – as far as is possible – to what extent anthropogenic greenhouse gas emissions contribute, in whole or in part, and if so for what part, to global warming and climate change. Climate science may also indicate which greenhouse gases are damaging, with what intensity, and which concrete mitigation action is most effective. In this sense, climate science provides input to regulation: who exactly is the polluter, and to what extent? Based on this information, there is a need to examine, from a legal perspective – together with other perspectives like the economic and behavioural perspectives – what kind of regulatory action can take place: in addition to emissions trading, other regulatory instruments are also available, and it is even possible to apply a mix of instruments. The law also plays a role, however, if climate science cannot produce sufficient proof, since courts may be confronted with the question whether governments can ask private actors to take action, at their own costs, even if there is no clear evidence of potential future damage. In this context, the widely recognised precautionary principle plays a role, although the legal status and implementation of this principle are still being discussed.[53] This is relevant, for instance, when deciding on the total amount of emissions that will be distributed through the emissions trading instrument. Here, an interesting but complex link exists between, on the one hand, the limits of natural science in specifying in detail the anthropogenic causes of climate change, and on the other hand the challenge for the law to fill this gap by allowing for regulatory intervention without full proof. Further cooperation is needed in this respect between natural and legal experts.

Second, the instrument of emissions trading has so far been applied only in the legal systems of several developed countries. Since climate change needs to be addressed by all legal systems across the world, based on the principle of common but differentiated responsibilities that basically justifies differentiation of commitments across developed and developing countries, there is a need to explore whether emissions trading is also worthwhile to be considered in developing countries.[54] Obviously, such studies should not use a legal-technocratic approach, but have to incorporate social studies that show to what extent the institutional framework of a country is solid enough to handle the distribution of the allowances – which is most probably sensitive to fraud, particularly in the case of free allocation of the allowances – and the implementation of monitoring and enforcement tasks in a specific country. In this respect, it is particularly the right to choose from among the toolbox of available regulatory instruments that should be part

[53] See for instance Nicolas de Sadeleer (2007). Implementing the Precautionary Principle: Approaches from the Nordic Countries, EU and USA, Earthscan. On the precautionary principle and EU emissions trading see Astrid Epiney (2004), Climate Protection Law in the European Union. Emergence of a New Regulatory System, Journal for European Environmental & Planning Law, Volume 9, Issue 1, pp. 5-33.

[54] Michael Faure, Marjan Peeters, Andri Wibisana (2006). Economic instruments: suited to developing countries?, In: Elaborating on integration of environmental legislation: the case of Indonesia, in: Michael Faure, Nicole Niessen (eds.), Environmental Law in Development; Lessons from the Indonesian Experience, Edward Elgar 2006, p. 218-284 (http://ssrn.com/abstract=2361420).

of the discussion, since more traditional command-and-control instruments might fit in better with weak institutions (and be less sensitive to fraud) than the market-based instruments. Such a choice, however, needs to be examined from a multidisciplinary social science perspective.

For the near future, it is to be expected that several countries around the world, including countries like China, Brazil and Kazakhstan, will (or will consider to) apply emissions trading as part of their national climate policy.[55] For each and every country, the specific institutional and other circumstances within which the instrument will be developed and applied need to be examined, which would appear to require integrated approaches incorporating legal, economic, and socio-cultural perspectives. Numerous design and implementation questions have to be answered, with careful balancing of the characteristics of the legal, economic, and social system within which the instrument will be applied; one cannot simply "transplant" the EU or USA emissions trading model to countries like China. Large differences between legal systems, however, do not mean that some comparative research would be useless: instead, taking into account the large differences, one could try to learn lessons from successes and failures achieved with existing applications.

19.5 Conclusion: in search of integrated research opportunities within the limits imposed by complexity

Further research is needed for an understanding of the potential contribution of emissions trading (and other forms or regulation) to the mitigation of greenhouse gases and, in a wider perspective, to sustainable development. Socio-economic consequences of carbon trading can be examined by means of integrated research, which could include combining economic perspectives on regulation with human rights examinations. However, in-depth legal research is still needed, since, for instance, the design and application of procedural rights and of enforcement provisions need to be better understood. In this respect we are still in a learning phase. Next to this mono-disciplinary approach, one could experiment to see how law can become part of multidisciplinary and more integrated research towards market-based regulation. Conversely, other disciplines can take up the challenge to cooperate with legal scholars to provide new insights into and comments on legal concepts and, more closely related to practice, on the potential development of legislation and court procedures.

How exactly more integrative research incorporating the legal discipline can be done needs to be further understood. Indeed, while the legal discipline as such is already perceived to be very complex – since the law itself, particularly environmental law, has become increasingly difficult to master, also because it is part of the globalising world

[55] https://icapcarbonaction.com/ets-map. Some countries have already started this; see the website map.

with multilevel and polycentric regulatory approaches – conducting multidisciplinary and integrative studies may further increase the complexity of research. Only by undertaking such studies will it become clear how or to what extent cooperation can realistically contribute to the furtherance of sustainability science.

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